GEOGRAPHIC SCHOOL BULLETINS

THE NATIONAL GEOGRAPHIC SOCIETY, WASHINGTON 6, D.C.

VOLUME XXXVI, NUMBER 10, DECEMBER 9, 1957 . . . *To Know This World, Its Life*

109

NATIONAL GEOGRAPHIC PHOTOGRAPHER JOSEPH BAYLOR ROBERTS

Kyushu's clay dolls have developed from playthings to a major Japanese export

► Kyushu Turns Problems to Profit
► Arabian Sea
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► Alabama—Photographer's View
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WILLARD PRICE

grows in Oita Prefecture. From there rakes, fishing poles, shades, and dozens of other products are shipped all over the world. Japanese love of beauty takes delicate form in the famous Hakata dolls, made from a fragile clay of northern Kyushu. Seven to 10 years of apprenticeship are required for an artisan to produce the beautiful dolls shown on the cover.

It was in Nagasaki that Madame Butterfly, immortal heroine of Puccini's opera, scanned the horizon waiting for her lover's ship to return. First port of call for many of today's passenger liners is Moji, above, on the Inland Sea, key center for domestic and foreign shipping. An impressive segment of Japan's steel industry pulsates in tall blast furnaces and smoking chimneys of the Yawata Iron and Steel Works, near by. More than 60 percent of Japan's coal output comes from Kyushu's prefectures of Fukuoka, Nagasaki, and Saga. Forty percent of the country's total steel products are turned out by northern Kyushu's mills.

Though Kyushu seems to collect calamities, it has learned to meet them with the jujitsu principle—turning an enemy's strength to one's own advantage. When World War II's second atomic bomb wiped out Nagasaki in 1945, 73,884 people perished. Yet before long enterprising Kyushu artisans were selling mushroom-shaped tourist trinkets.

When the sea seeped into a coal mine at Fukuoka, miners stayed on the job, pumping out 53 tons of water for every ton of coal they mined. Boiling waters of the volcanic area in the north are piped into homes for cooking and bathing and used for heating schools.

Northern volcanoes leave the land abundantly rich with mineral resources and hot springs. Beppu, on the east coast, lies in the heart of the region known as the Japanese Riviera, where springs bubble forth like cauldrons.

Here volcanic debris and boiling springs have been turned to great advantage as health aids. People go by the thousands to enjoy bathing in intensely hot sulphur waters that spring from volcanic rifts and slumbering craters. Kyushu maidens at right bathe under a steaming waterfall which massages their bodies and supposedly drives out rheumatic pains. In hot seashore sands people often lie for days, buried up to their necks in volcanic ash for various cures.—K.C.

WILLARD PRICE

UMI

Kyushu

Japanese Island Turns Problems Into Profits

INTERNATIONAL NEWS PHOTOS

SMOKE clouds, gas, and sizzling stones belch forth from Sakura Jima Volcano, blanketing part of Japan's southernmost island of Kyushu with ashes and destruction. A refugee, loaded with all the belongings he can carry, hurries to keep ahead of a mile-wide wall of lava. This was in 1946, when the volcano erupted for the 27th time in 500 years.

Like this fleeing Japanese, Kyushu's indomitable people seem to have the knack of rescuing their wealth and culture from a plague of catastrophes. Lying along the edge of a typhoon-infested sea, Kyushu reaps wild winds every year. Tragic storms have destroyed thousands of homes, left hundreds dead in their wake. Floods often wipe out an entire year's rice crop. Yet the island thrives.

On the map, Kyushu looks like a sea horse shivering in anticipation of more disasters. Its irregular coastline, deeply scalloped with bays and gulfs, provides countless harbors and seaports. Since earliest times it has been a steppingstone for foreign conquest. Happier invasions, too, have left their imprint.

This was the gateway through which medieval Japan absorbed advanced Chinese culture. Ancestors of the modern Japanese race supposedly landed first at Kyushu, conquered the native occupants, and spread to the other islands. And it was at Nagasaki that St. Francis Xavier brought Christianity to Japan in 1549.

A land of mystic legend and unsurpassed beauty, Kyushu has within its seven prefectures virtually everything that Japan has to offer. Approximately 11,660,000 people live on this third-largest Japanese island—in an area about twice the size of New Jersey.

Two main features distinguish the interior. A high plateau, crusted with lava and volcanic ash, lies in the north, and a rumpled area of mile-high mountain masses in the south. Below graceful terraced hills rain-drenched valleys produce much of Japan's rice. The majority of the country's bamboo

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with their awkward sails carry salt, grains, and other goods to tiny sun-blistered coastal villages—Mukalla, Shihr, Saihut—along the Arabian Peninsula. Wherever market prices are high, the dhows make port. Alan Villiers, captain of the *Mayflower II* on its recent transatlantic voyage, took a seaman's berth in such vessels and reported his experiences in the November, 1948, *National Geographic Magazine*.

For centuries the Arabian Sea has been a kind of magic carpet for trade between India, Arabia, and Africa. Today these areas are growing in strategic importance. Northern segment of the Indian Ocean, the Arabian Sea is bounded officially on the south by a line drawn from the eastern tip of Africa to the Maldive Islands off India. Its western waters wash the African coast of Somalia, formerly Italian Somaliland. Along the Arabian Peninsula, it touches Britain's Aden Protectorate and the Sultanate of Muscat and Oman. To the north and east it laps against Iran, Pakistan, and India.

Through most of their history, these waters teemed with pirates. The Roman historian Pliny said all ships crossing the Arabian Sea carried companies of archers to fend off pirate attacks. Centuries later, Marco Polo reported that huge fleets of pirate vessels patrolled the water.

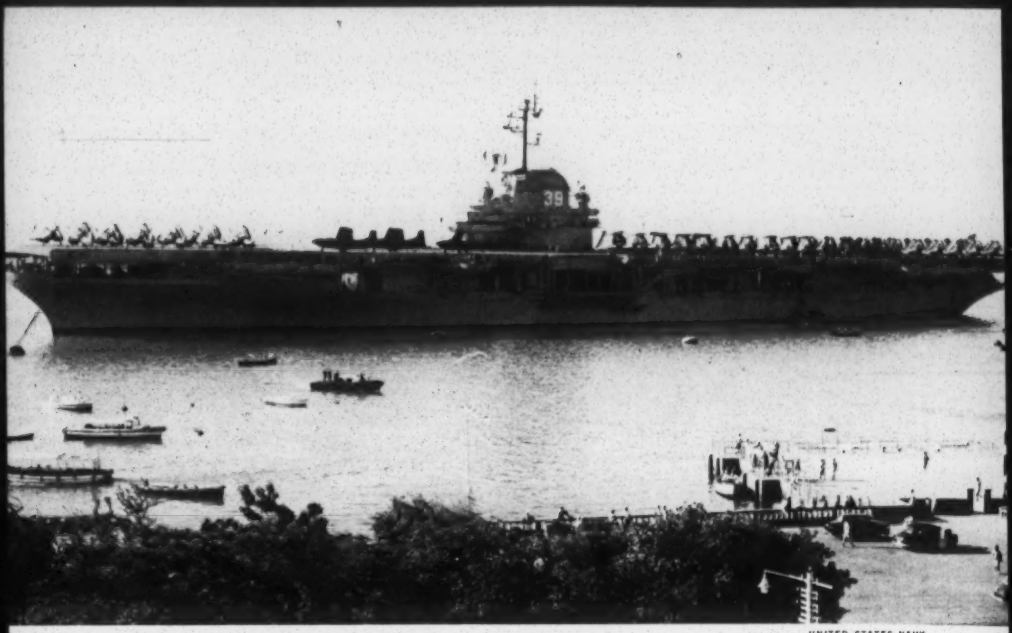
"No merchant ship can escape them," said Polo. "For when any one corsair sights a vessel a signal is made by fire or smoke, and then the whole of them make for this and seize the merchants and plunder them. After they have plundered them, they let them go saying, 'Go along with you and get more gain, and mayhap that will fall to us also.' "

The notorious Captain William Kidd ventured into the Arabian Sea and neighboring waters at the end of the 17th century. Kidd found the local pirates too much for him. After taking only one good prize, he departed for the West Indies where there was less competition.—

National Geographic References: ***Map***—Africa and the Arabian Peninsula (paper, 75¢). ***Magazine***—June 1957, "The Marvelous Maldive Islands" ($1.00); February 1957, "Along the Storied Incense Roads of Aden" ($1.00); July 1956, "Desert Sheikdoms of Arabia's Pirate Coast" ($1.00); April 1954, "Troubled Waters East of Suez" ($1.00); December 1952, "Boom Time in Kuwait" ($1.00); February 1952, "Yemen Opens the Door to Progress" ($1.00); November 1948, "Sailing with Sindbad's Sons" ($1.00); April 1948, "In Search of Arabia's Past" ($1.00); ***Bulletins***—November 1, 1954, "Sons of Sindbad Sail the Eastern Seas" (10¢).

IN FULL SAIL an Arabian Sea dhow can make more than 250 miles a day—if the wind is right. Crew lives in the thatched shelter amidships. Captain rates the ornate poop

F. N. BETTS



UNITED STATES NAVY

U. S. Navy Hoists Colors East of Suez

Fleets Meet in Arabian Sea

IN the Arabian Sea, sailors' eyes are popping at such sights as that above. "Exercise Crescent," a 13-day joint maneuver of naval units from Pakistan, Turkey, the United Kingdom, and the United States, brings 25 of the latest ships of war into blue waters where the Arab dhow is a far commoner sight. For the past two weeks bronzed sons of Sindbad have been learning to tell an American destroyer from a British corvette.

Ships of the Western World are no novelty on the Arabian Sea's well-traveled shipping lanes. Oil tankers form a steady procession from Abadan and Kuwait in the Persian Gulf around the boot of the Arabian Peninsula to the Red Sea and the Suez Canal. White-painted liners and deep-laden freighters carrying Australian wool and meat make for the same passage to the Mediterranean. For years passing ships have called at Aden (GSB Oct. 15, 1956).

Ships of the United States Navy have often wet their steel bottoms in the warm waves of the Arabian Sea. The "Middle East" Force has cruised these waters frequently since World War II, showing the flag to troubled Near East nations that produce vital quantities of oil. On one such cruise, the carrier U.S.S. *Lake Champlain* was photographed (above) refueling at Aden.

But away from these well-churned salt-water trails the dhow with its creaking lateen rig still reigns in the Arabian Sea. From dusty little ports clinging to the edge of Arabian sands, the vessels that Sindbad himself would remember nudge along hot barren coasts. Some carry tight-packed pilgrims to Jidda, Red Sea port for Mecca. Some feel their way from Aden down the African coast to Mombasa and Zanzibar. Some slip across the Gulf of Oman from Muscat to Karachi.

Rugged Arabian seamen fish for their food, cook it over driftwood fires, and sleep on deck. Without bothering to keep a schedule, the sturdy teakwood vessels

The Mighty St. Bernard

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N. Y. HERALD TRIBUNE

THIS champion St. Bernard could swallow his young charge almost at a gulp. But the baby could scarcely have a more dependable sitter. Few dogs are as gentle, loyal, and wise as the St. Bernard.

These 140- to 160-pound dogs are still raised at the old St. Bernard Hospice, 8,113 feet high in a Swiss mountain pass. They don't carry brandy casks except for the benefit of photographers and cartoonists. But their rescues of snowbound travelers are no mere legend.

Most famous of these huge brown and white dogs was Barry, who saved 41 lives about a century and a half ago. Finding a small boy caught on a mountain ledge, Barry licked his face to wake him, then sprawled across him to lend body warmth. Gently, Barry began dragging the young victim from the ledge. The boy clambered to the dog's shaggy back and was brought to safety.

Since then, there has always been a Barry at the Hospice—the latest namesake, right, towers above a monk. Though there are fewer rescues to perform these days, Barry and his friends can smell out an avalanche victim buried under snow. And they seem to have a sixth sense to warn them of snowslides.—E. P.

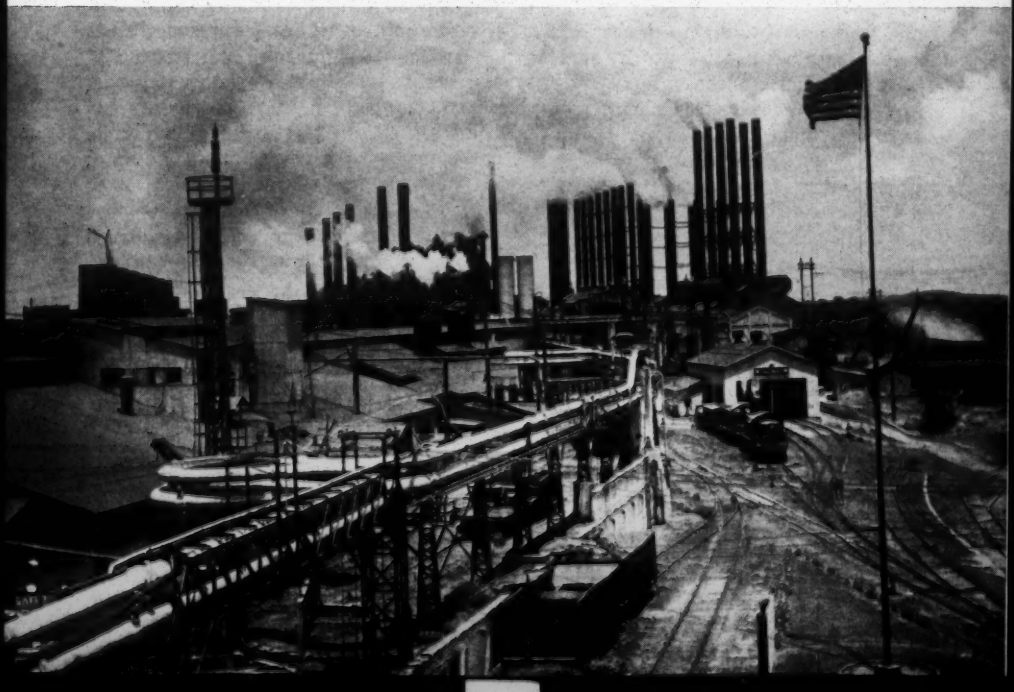
to covering grasses. Culver saw the red and white pattern of white-faced cattle spread across many a green hillside. Alabama, where forests once fell to make room for plantations, now stakes its claim as one of the Nation's top wood-producing States and pulp paper manufacturers.

Near Montgomery lies the Air Force's Maxwell Field where air officers study jet and atom age warfare. Brookley Air Force Base dispenses the largest payroll in the Mobile area. And at Huntsville in the north, scientists at the Army's famed Redstone Arsenal test missiles like the Redstone, Nike, and Jupiter on the big 40,000-acre reservation. Led by Dr. Wernher von Braun, German-born developer of the V-2 rocket of World War II, they are busy designing and testing new, high-flying missiles and a rocket vehicle that is racing to put an American satellite in space.

Such dead-serious goings-on, right in his back yard, have not dulled the average Alabamian's delight in having a good time, Culver found. Men take time off to fish in fresh-water T. V. A. lakes or off the salt-water Gulf coast. The Alabama Deep Sea Fishing Rodeo draws hundreds of anglers each year to waters off Mobile Bay. There, 93 years ago, Admiral David G. Farragut damned the torpedoes and ordered full speed ahead to defeat the Confederate ironclads and blockade Mobile, the Confederacy's last remaining seaport on the Gulf.

A broad new beach for swimmers recently opened on Dauphin Island, Alabama's Riviera. Upstate, annual powerboat races draw thousands of enthusiasts to Guntersville Lake on the Tennessee. Football fans all over the State noisily follow the fortunes of such teams as those of the University of Alabama at Tuscaloosa and Alabama Polytechnic Institute at Auburn.

The Deep South's tradition and history flavor Alabama life. Culver sat down to a family-style dinner of 30 courses at the famous Purefoy Hotel at Talladega. He strolled through Bellingrath Gardens in Mobile, fascinated by their fiery display of springtime azaleas. His camera lenses focused on intricate iron grillwork on ante-bellum homes.



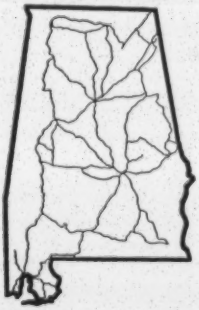
ALABAMA . . . *f 11 at 1/100th*

MIAMI DAILY NEWS

WHEN a National Geographic photographer sets out to do a story on a State, he really covers it. Take Willard R. Culver (right), topflight staff cameraman for 24 years, and take Alabama, his current assignment. The map below shows the routes he followed (some of them many times) in traveling 4,000 Alabama miles with Leica and light meter.

Mr. Culver isn't often "up a tree" about any photographic problem. But he found Alabama a State of such manifold attractions that he required 12 weeks and two trips to complete his coverage, making these pictures along the way.

As he drove along miles of modern dual-lane highways and excellent secondary roads that today knit the State together, he saw through his car windows the rapidly changing face of Alabama. Change, he reports, grips each section of the State. In the north, in the valley of the Tennessee River, such industries as aluminum and automobile fabrication have moved in to take advantage of cheap electrical power generated by T. V. A. dams. The road southward brought him to the north-central plateau area called the "Mineral Belt" and the blast furnaces of steel mills at Birmingham (page 117).



Here the valley is rich in limestone. Near-by Red Mountain is a giant cache of high-quality iron ore. Adjoining hills hold deposits of coal. Since these are the very elements necessary for the manufacture of iron and steel, they combine to make Birmingham the South's steel-mill center and Alabama's first city. Culver says the addition of other industries in recent years gives Birmingham the feel of a big metropolis with a broad economic background.

From Birmingham, Culver drove to tradition-rich Montgomery, Alabama's capital. There he made the photo below of the classic Capitol building with its statue of Jefferson Davis, President of the Confederacy, standing in front. This is the center of Alabama's agricultural "black belt," so called because of its dark, loamy soil. To his surprise, Culver found that cotton is no longer king as in the old days. Today it shares the crown with poultry, cattle, and the burgeoning peanut crop. Much of the peanut harvest comes from the "wild-grass" country to the southeast where land once considered useless by Montgomery plantation owners is proving ideal to produce the State's No. 2 crop (see picture, page 118).

Cattle raising took firm hold within recent years when cotton-conscious Alabama farmers began to exploit their grass—it stays green eleven months and 30 days of the year. Now worn-out cotton fields are being sown

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UMI

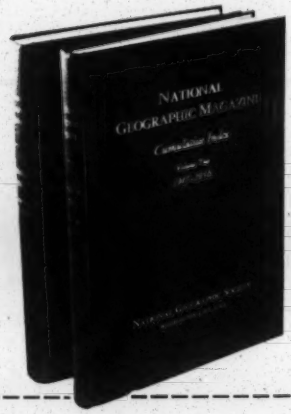
In the northeast corner of the State, an archeological treasure house, Russell Cave, has recently been brought to light through the combined efforts of the National Geographic Society and the Smithsonian Institution. Digging has unearthed bones proved to be those of the earliest known inhabitants of the southeastern United States, some calculated to be at least 8,000 years old.

Traveling constantly, Willard Culver made a firm acquaintance with the State's spreading network of modern transportation. In addition to developing its highways, Alabama is trying to make full use of its natural inland waterway system. Congress has authorized (but not yet appropriated funds for) a barge canal which will link the north-to-south Tombigbee River and its tributaries to the Tennessee. When this feat is completed, barges will be able to slip through a slack-water route from the Great Lakes down the Illinois, Mississippi, Ohio, Tennessee, and Tombigbee Rivers to Mobile, on the Gulf.

Mobile, the second-largest city, eagerly awaits such a development. Its landlocked, deep-dredged harbor yawns invitingly. Its wharves are well equipped with cranes, rail sidings, and storage facilities to handle anything from a river barge to the largest ocean freighter (below). Out of the holds of such ships comes iron ore for the flaming mills of Birmingham and bauxite for new aluminum plants. The traffic is heavy enough to earn for Mobile sixth place among the Nation's ports.

Flags of France, Spain, England, and the United States have flown over Mobile. The Stars and Bars snapped overhead during the Civil War. And between the time of secession and the formation of the Confederacy, the colors of the temporary Republic of Alabama took the air.—A.P.M.

National Geographic References: ***Map***—Southeastern United States (paper, 75¢; fabric, $1.50). ***Magazine***—October 1956, "Life 8,000 Years Ago Uncovered in an Alabama Cave" (out of print). ***School Bulletins***—December 17, 1956, "Christmas Greenery" (10¢); October 15, 1956, "Alabama's Oldest Home" (Russell Cave) 10¢.



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